X. CRITICAL COASTAL AREAS, ADDITIONAL MANAGEMENT MEASURES AND TECHNICAL ASSISTANCE

FINDING: Oregon's program does not include processes for the identification of critical coastal areas or for the development and continuing revision of management measures applicable to critical coastal areas and cases where the 6217 (g) measures are fully implemented but water quality threats or impairments persist. The program does not describe efforts to provide technical assistance to local governments and the public for implementing additional management measures.

CONDITION: Within two years, Oregon will identify and begin applying additional management measures where water quality impairments and degradation of beneficial uses attributable to forestry exist despite implementation of the (g) measures. Within two years, Oregon will develop a process for the identification of critical coastal areas and a process for developing and revising management measures to be applied in critical coastal areas and in areas where necessary to attain and maintain water quality standards. Also within two years, the State will develop a program to provide technical assistance in the implementation of additional management measures.

RATIONALE: The State had not begun development of these three programmatic elements at the time of program submission. The program submittal stated that Oregon intended to review the designation of special coastal areas under other programs and initiatives to assess whether such designations are also appropriate for the purposes of Section 6217. In addition, the State intends to develop a list of impaired waters potentially subject to additional management measures. The State submittal indicates that a program to provide technical assistance will be developed after the additional management measures have been identified. Technical assistance may be provided through the ongoing efforts under the 319 program. NOAA and EPA encourage the State to pursue these efforts.

The State recently engaged with NMFS in developing the Coastal Salmon Restoration Initiative (CSRI) to stabilize and restore native coastal salmon populations and prevent the need for a listing of coho salmon as threatened or endangered under the federal Endangered Species Act (ESA). NMFS worked closely with State agencies throughout this process, and has identified a number of concerns with existing state programs that relate to the ability of those programs to protect and maintain essential features of habitat for proposed or listed anadromous salmonids. In developing a process for the identification of critical coastal areas and for developing and revising additional management measures to be applied in critical coastal areas and in areas where necessary to attain and maintain water quality standards, the State needs to consider the issues raised by NMFS and how the additional management measures and critical coastal areas provisions of the coastal nonpoint program can interface with and enhance the CSRI.

As NMFS has described to the State in other documents, such areas might include (1) key spawning, rearing, and migratory habitats of listed anadromous salmonids; (2) existing highly productive, or potentially highly productive, subareas within watersheds; and (3) basins, subbasins, or watersheds that support multiple anadromous salmonid species or Evolutionarily Significant Units, and where restoration actions have a high potential to substantially improve productivity. Core areas for salmonid protection designated under the CSRI, important shellfish harvesting areas, or Natural and Conservation units of estuaries as designated under the Oregon Estuary Plan are examples of areas that might be considered critical coastal areas.

Within two years, Oregon will identify and begin applying additional management measures for forestry. As discussed in section III, above, Oregon's program includes management measures for forestry in conformity with the (g) guidance. Best available information, however, indicates existing water quality impairments attributable to forestry in certain areas, and that the existing FPRs are inadequate to restore water quality and fully support designated beneficial uses. The State has the authority, under OAR 629-635-120, to develop and adopt watershed specific rules for forestry in watersheds that have been designated as water quality limited or for watersheds containing threatened or endangered aquatic species. This authority would be useful in developing appropriate additional management measures for forestry; however, the State has not indicated whether or how it intends to implement this process.

EPA and NOAA have identified areas where existing practices under the FPA and FPR **should be** strengthened to attain water quality standards and fully support beneficial uses. These areas include protection of medium, small, and non-fish bearing streams, including intermittent streams; protection of areas at high risk for landslides; the ability of forest practices to address cumulative impacts of forestry activities; road density and maintenance, particularly on so-called "legacy" roads; and the adequacy of stream buffers for application of certain chemicals.

Under existing State forest practices, medium, small, and non-fish bearing streams may be subject to loss of sediment retention capacity, increases in delivery of fine sediments, and increases in temperature due to loss of riparian vegetation. Another concern is provision of adequate long-term supplies of large woody debris in medium, small, and non-fish bearing streams, a shortage of which can result in decreased sediment storage in upstream tributaries, increased transport and deposition downstream, and overall adverse impacts to beneficial uses.

"Legacy forest roads" (that is, roads constructed and used prior to adoption of the FPA and not used and maintained since then) were not required to be treated and stabilized before closure. In some locations, this has resulted in significantly altered surface drainage, diversion of water from natural channels, and serious erosion or landslides. The ODF has proposed an expedited voluntary program to inventory and prioritize the upgrading of roads built prior to 1974 on industrial forest lands.

Regarding concerns with harvest activities in high risk landslide areas, evidence indicates that timber harvests on unstable, steep terrain can result in increases in landslide rates of approximately 200 to 400 percent. There are also indications that a relatively small proportion of potentially unstable ground in the Oregon Coast Range is responsible for the majority of landslides in Oregon.

Forest practice rules in effect at the time the Oregon 6217 program was submitted for approval did not require buffers for aerial application of herbicides or fertilizers for type N (non-fishbearing) streams. Such streams comprise significant portions of total stream length in the coastal zone. In January 1997, the ODF revised its rules governing application of chemicals. The new rules require a 60 foot buffer on type N streams for direct aerial application of fungicides and nonbiological insecticides except as approved by the State forester. The rules do not contain restrictions for aerial application of herbicides, which would appear to leave type N streams still at risk.

Cumulative effects of increased water temperature, sediment transport, road density, hydrological modification, and other factors can manifest themselves at a larger system scale and have adverse effects over an entire watershed or basin, rather than at a particular site or stream reach. The scope and pattern of these types of effects have recently become much more apparent through the use of watershed and landscape analysis. Cumulative effects are a concern not only within the forestry sector but across all land use or management measure categories within a watershed.